

PATENT COOPERATION TREATY

1. PRELIMINARY EXAMINING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY
EXAMINING AUTHORITY

(PCT Rule 66)

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JUN 02 2006
RECEIVED

Date of mailing (day/month/year) 31 MAY 2006	
Applicant's or agent's file reference 60158-286	REPLY DUE within 1 months/days from the above date of mailing 13
International application No. PCT/US05/00095 ✓	International filing date (day/month/year) 04 January 2005 (04.01.2005) ✓
Priority date (day/month/year) 01 May 2004 (01.05.2004)	
International Patent Classification (IPC) or both national classification and IPC IPC: B21D 53/06(2006.01);B21C 37/20(2006.01) USPC: 29/890.045,890.049;72/370.02,370.1,370.13,370.16,370.17,370.18,370.21	
Applicant COOPER-STANDARD AUTOMOTIVE INC.	

1. ☒ The written opinion established by the International Searching Authority.
☒ is ☐ is not
considered to be a written opinion of the International Preliminary Examining Authority.
2. This second (first, etc.) opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis. For an informal communication with the examiner, see Rule 66.6. For an additional opportunity to submit amendments, see Rule 66.4.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is: **01 September 2006 (01.09.2006)**

Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Marc Jimenez Telephone No. (571) 272-4530
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WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

PCT/US05/00095

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this opinion has been established on the basis of (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."*):

- ☐ the international application as originally filed/furnished
- ☒ the description:
pages 1-5 as originally filed/furnished
pages NONE received by this Authority on _____
pages NONE received by this Authority on _____
- ☒ the claims:
pages NONE as originally filed/furnished
pages NONE as amended (together with any statement) under Article 19
pages 6 and 7 received by this Authority on 30 August 2005 (30.08.2005)
pages NONE received by this Authority on _____
- ☒ the drawings:
pages 1/4-4/4 as originally filed/furnished
pages NONE received by this Authority on _____
pages NONE received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. 18 and 19
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

**WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY**

International application No.
PCT/US05/00095

Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>17</u>	YES
	Claims <u>1-16</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-17</u>	NO
Industrial Applicability (IA)	Claims <u>1-17</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations:

Claims 1-3, 5, 7 and 9-14 lack novelty under PCT Article 33(2) as being anticipated by Takashi et al. (US4715436). Takashi et al. teach in figure 1a: positioning a circular tube (1) in a first position, forming an indentation (3) on the tube with a mold/roller (2), moving the tube to a second position (see arrows showing rotation of the tube) relative to the mold (2), and releasing (see arrows pointing to left) the mold from the tube (2). Note that indentation is repeated by (2). Rotational moving occurs before releasing the tube (2). As shown in figure 1a, rotating occurs approximately 5 to 10 degrees between each step of repeating. Note the plurality of rollers (2).

Claims 1-8 and 10-16 lack novelty under PCT Article 33(2) as being anticipated by Beutler et al. (US6488078). Beutler et al. teach positioning a circular tube (1) in a first position, forming an indentation (7) on the tube with a mold/roller (10), moving the tube to a second position (see arrows showing rotation of the tube) relative to the mold (2), and releasing the mold from the tube (2). Note that indentation is repeated by (10). Rotational moving occurs before releasing the tube (10). As shown in figure 8, rotating occurs approximately 5 to 10 degrees between each step of repeating. Note the plurality of rollers (col. 4, line 11). Note in figure 11 there is a secondary former (16) which meets the step of moving occurring after a releasing step. The releasing step from the first former (13).

Claim 17 lacks an inventive step under PCT Article 33(3) as being obvious over Beutler et al. Beutler et al. do not specifically disclose a valve to control a flow of the first fluid into the tubes and parallel indentations. However, official notice is taken that it was well known to a person of ordinary skill in the art, at the time of the invention, to have provided a control valve to control fluid flow and to include parallel indentations depending upon the desired heat transfer characteristics.

Claims 1-17 meet the criteria set out in PCT Article 33(4), and thus meets industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

US 6,488,078 B2 (BEUTLER et al) 03 December 2002, figures 1-13.

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Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient.)

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Report on Patentability (Chapter II of the Patent Cooperation Treaty).